

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1905	(430/1 or 430/2 or 359/3 or 359/12). ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/16 15:32
L2	38	I1 and (pdlc or ((polymer near5 dispersed) near5 (lc or crystal\$1)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/16 15:34
L3	5	(copy or copying or copied or (contact near5 expos\$6)) and I2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/16 15:35

\$%^STN;HighlightOn= \*\*\*;HighlightOff=\*\*\* ;

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and text labels  
NEWS 23 JUL 01 MEDICONF removed from STN  
NEWS 24 JUL 07 STN Patent Forums to be held in July 2005  
NEWS 25 JUL 13 SCISEARCH reloaded  
NEWS 26 JUL 20 Powerful new interactive analysis and visualization software,  
STN AnaVist, now available  
NEWS 27 AUG 11 Derwent World Patents Index(R) web-based training during  
August  
NEWS 28 AUG 11 STN AnaVist workshops to be held in North America  
  
NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005  
  
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FILE LAST UPDATED: 15 Aug 2005 (20050815/ED)

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=> s (pdlc or ((polymer(4a)dispers?) (5a) (lc or lcd or (liquid(4a)crystal))))

819 PDLIC

169 PDLCS

884 PDLIC

(PDLIC OR PDLCS)

1020028 POLYMER

840995 POLYMERS

1381077 POLYMER

(POLYMER OR POLYMERS)

604841 DISPERS?

32805 LC

1228 LCS

33413 LC

(LC OR LCS)

11200 LCD

1147 LCDS

11697 LCD

(LCD OR LCDS)

691088 LIQUID

123676 LIQUIDS

784645 LIQUID

(LIQUID OR LIQUIDS)

964955 LIQ

92015 LIQS

1000835 LIQ

(LIQ OR LIQS)

1384151 LIQUID

(LIQUID OR LIQ)

1171264 CRYSTAL

617496 CRYSTALS

1444992 CRYSTAL

(CRYSTAL OR CRYSTALS)

2529 (POLYMER(4A)DISPERS?) (5A) (LC OR LCD OR (LIQUID(4A)CRYSTAL))

2603 (PDLIC OR ((POLYMER(4A)DISPERS?) (5A) (LC OR LCD OR (LIQUID(4A)CRYSTAL))))

L1

```
=> s (copy? or copied or master? or (contact(5a)expos?)) and l1
    60812 COPY?
    2863 COPIED
    29897 MASTER?
    445801 CONTACT
    108018 CONTACTS
    501678 CONTACT
        (CONTACT OR CONTACTS)
    761304 EXPOS?
    6694 CONTACT(5A)EXPOS?
L2      5 (COPY? OR COPIED OR MASTER? OR (CONTACT(5A)EXPOS?)) AND L1

=> s (copy? or copied or master? or duplicat? or (contact(5a)expos?)) and l1
    60812 COPY?
    2863 COPIED
    29897 MASTER?
    32531 DUPLICAT?
    445801 CONTACT
    108018 CONTACTS
    501678 CONTACT
        (CONTACT OR CONTACTS)
    761304 EXPOS?
    6694 CONTACT(5A)EXPOS?
L3      5 (COPY? OR COPIED OR MASTER? OR DUPLICAT? OR (CONTACT(5A)EXPOS?))
        AND L1

=> d all 1-5
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L3  ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2005 ACS on STN
AN  2004:360257  CAPLUS
DN  140:383146
ED  Entered STN:  04 May 2004
TI  System and method for replicating volume holograms
IN  Sutherland, Richard L.; Sappington, John; Brandelik, Donna M.; Siwecki,
    Stephen A.; Shepherd, Christina K.; Pogue, Robert T.
PA  Science Applications International Corporation, USA
SO  U.S., 29 pp.
    CODEN: USXXAM
DT  Patent
LA  English
IC  ICM  G03H001-02
INCL 430001000; 430002000; 359012000; 359003000
CC  74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
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FAN.CNT 1
PATENT NO.      KIND      DATE      APPLICATION NO.      DATE
-----
PI  US 6730442      B1      20040504      US 2000-577166      20000524
    US 2004175627      A1      20040909      US 2004-796071      20040310
PRAI US 2000-577166      A1      20000524
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CLASS
PATENT NO.      CLASS      PATENT FAMILY CLASSIFICATION CODES
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US 6730442      ICM      G03H001-02
INCL 430001000; 430002000; 359012000; 359003000
US 6730442      NCL      430/001.000; 359/003.000; 359/012.000; 430/002.000
ECLA G02F001/1334H; G03H001/04F; G03H001/20; G03H001/28
US 2004175627      NCL      430/001.000
ECLA G02F001/1334H; G03H001/04F; G03H001/20; G03H001/28
```

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AB  The present invention offers increased efficiency and quality in the
    ***duplication*** of a ***master*** hologram utilizing an improved
    method of contact printing. This improved method of contact printing
    employs a ***polymer*** - ***dispersed*** ***liq***
    ***crystal*** ( ***PDLC*** ) recording medium as the
    ***duplication*** blank and/or the ***master*** hologram material.
    The optical qualities of the ***PDLC*** material described herein
    provide an improved method of ***duplication*** using single beam
    contact printing regardless of the material comprising the ***master***
    hologram. Thus, ***master*** holograms originally recorded using
    highly complex optical geometries (e.g., computer generated holograms) are
    capable of ***duplication*** without the need for multiple beam
```

power/intensity balancing and long recording times. The improved hologram contact printing method described herein works with virtually any type of \*\*\*master\*\*\* hologram, including both reflection and transmission holograms.

ST replicating vol holograms

IT Holography

\*\*\*Polymer\*\*\* - \*\*\*dispersed\*\*\* \*\*\*liquid\*\*\* \*\*\*crystals\*\*\*

(system and method for replicating vol. holograms)

RE.CNT 136 THERE ARE 136 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 1998:483253 CAPLUS  
DN 129:189970  
ED Entered STN: 04 Aug 1998  
TI Effect of molar mass of an epoxy oligomer on the phase separation in epoxy  
based \*\*\*polymer\*\*\* \*\*\*dispersed\*\*\* \*\*\*liquid\*\*\*  
\*\*\*crystals\*\*\*  
AU Siddiqi, Humaira Masood; Dumon, Michel; Pascault, Jean Pierre  
CS Laboratoire des Matériaux Macromoléculaires UMR 5627 CNRS, Institut  
National des Sciences Appliquées, Villeurbanne, F- 69 621, Fr.  
SO Journal of Materials Chemistry (1998), 8(8), 1691-1695  
CODEN: JMACEP; ISSN: 0959-9428  
PB Royal Society of Chemistry  
DT Journal  
LA English  
CC 37-5 (Plastics Manufacture and Processing)  
Section cross-reference(s): 75  
AB \*\*\*Polymer\*\*\* \*\*\*dispersed\*\*\* \*\*\*liq\*\*\* . \*\*\*crystals\*\*\*  
based on epoxy-amine [DGEBA-Jeffamine D400] crosslinked matrixes and a  
nematic liq. crystal, E7, were studied over the course of polymn., i.e. as  
a function of the polymn. conversion. The effect of the mol. wt. of the  
epoxy oligomer on the initial temp.-conc. and the temp.-conversion phase  
diagrams was studied. An increase of the epoxy oligomer mol. wt. greatly  
reduces the initial liq. crystal soly. and brings the cloud point to  
earlier polymn. conversions, which were quantified. Thus the phase sepn.  
is markedly enhanced. The temp.-conversion phase diagrams were  
characterized at two isothermal polymn. temps. for one liq. crystal compn.  
(50 wt.). These diagrams (isotropic-nematic and nematic-isotropic  
transition temps.) obey \*\*\*master\*\*\* curves when the mol. wt. of the  
epoxy is varied. The size of the liq. crystal droplets decreases when the  
mol. wt. of the epoxy increases. This effect is mainly due to the  
viscosity increase resulting from the oligomer wt. increase. Viscosity  
measurements were made at intervals during polymn.  
ST epoxy oligomer E7 liq crystal phase; phase sepn liq crystal epoxy  
IT Cloud point  
Phase diagram  
Phase separation  
Viscosity  
(effect of mol. wt. of epoxy oligomer on phase sepn. of epoxy/E7 liq.  
crystal dispersion)  
IT Epoxy resins, preparation  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(effect of mol. wt. of epoxy oligomer on phase sepn. of epoxy/E7 liq.  
crystal dispersion)  
IT Liquid crystals  
(nematic; effect of mol. wt. of epoxy oligomer on phase sepn. of  
epoxy/E7 liq. crystal dispersion)  
IT Liquid crystals  
(transitions, nematic-isotropic transition; effect of mol. wt. of epoxy  
oligomer on phase sepn. of epoxy/E7 liq. crystal dispersion)  
IT 63748-28-7, E7.  
RL: PRP (Properties)  
(effect of mol. wt. of epoxy oligomer on phase sepn. of epoxy/E7 liq.  
crystal dispersion)  
IT 110302-44-8P, DGEBA-Jeffamine D400 copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(effect of mol. wt. of epoxy oligomer on phase sepn. of epoxy/E7 liq.  
crystal dispersion)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:655031 CAPLUS

DN 127:353053

ED Entered STN: 15 Oct 1997

TI Liquid crystal display

IN Ikeda, Mitsushi; Fukunaga, Yoko

PA Toshiba Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02F001-136

ICS G02F001-1333; G02F001-1343

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09258260	A2	19971003	JP 1996-66634	19960322
PRAI	JP 1996-66634		19960322		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
------------	-------	------------------------------------

JP 09258260	ICM	G02F001-136
	ICS	G02F001-1333; G02F001-1343

AB The title display has contact holes for connecting TFTs and pixel electrodes, and an insulation film covered on the exposure regions of the pixel electrodes and common electrodes. The liq. crystal display may have multiple dye-contg. \*\*\*liq\*\*\* . \*\*\*crystal\*\*\* / \*\*\*polymer\*\*\*

\*\*\*dispersion\*\*\* layers. The invention can assure good connection and offer a simple way for manuf. of the high quality liq. crystal display.

ST liq crystal display contact hole; insulation film liq crystal display

IT Acrylic polymers, uses

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(forming insulation film in \*\*\*contact\*\*\* holes for covering

\*\*\*exposure\*\*\* region of pixel and common electrode for liq. crystal display)

IT Liquid crystal displays

(having contact hole for connecting TFTs and pixel electrodes)

IT 1518-16-7, Tetra cyano quinodimethane 7440-02-0, Nickel, uses

25233-30-1, Polyaniline 30604-81-0, Polypyrrole

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(coated on contact hole for connecting TFT and pixel electrode)

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:521852 CAPLUS

DN 121:121852

ED Entered STN: 03 Sep 1994

TI Copier-platen liquid-crystal variable area-mask devices

IN Ueno, Osamu; Hiji, Naoki

PA Fuji Xerox Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02F001-1333

ICS G02F001-13; G02F001-1343; G03B027-62; G03G015-00; H04N001-04

ICA G03G015-04

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)



## Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06051295	A2	19940225	JP 1993-135208	19930514
PRAI	JP 1992-166703	A1	19920603		

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 06051295	ICM	G02F001-1333
		ICS	G02F001-13; G02F001-1343; G03B027-62; G03G015-00; H04N001-04
		ICA	G03G015-04
AB	The device comprises: a matrix array of electrooptical ***polymer*** - ***dispersed*** ***liq*** .- ***crystal*** microcells; and means for driving the individual microcells for forming various transparent patterns. The device is suited for use as a variable mask on the platen of a ***copying*** machine.		
ST	liq crystal microcell array platen mask		
IT	Optical imaging devices (electrooptical ***liq*** .- ***crystal*** , ***polymer*** - ***dispersed*** microcell array, in variable-area platen masks, for copiers)		
IT	25038-59-9, Polyethylene terephthalate, uses RL: USES (Uses) ( ***liq*** .- ***crystal*** ***polymer*** - ***dispersed*** microcell arrays, as substrate)		

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:613850 CAPLUS

DN 117:213850

ED Entered STN: 28 Nov 1992

TI Composites of thermoplastic and liquid crystal polymers and their manufacture

IN Coffey, Gerald P.; Perec, Elena S.; Melamud, Lucy

PA BP America, Inc., USA

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08L101-00

ICS C08L067-03

CC 37-6 (Plastics Manufacture and Processing)

## Section cross-reference(s): 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 499387	A2	19920819	EP 1992-300827	19920131
	EP 499387	A3	19921223		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
	CA 2060494	AA	19920814	CA 1992-2060494	19920131
	CN 1067913	A	19930113	CN 1992-101629	19920212
	JP 05214253	A2	19930824	JP 1992-26416	19920213
PRAI	US 1991-654853	A	19910213		

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 499387	ICM	C08L101-00
		ICS	C08L067-03
AB	Chem resistant and mech. strong composites contg. .ltoreq.2% ***liq*** .- ***crystal*** ***polymer*** (LCP) ***dispersed*** in a thermoplastic resin are manufd. by dispersing .gtoreq.2% solid LCP into molten thermoplastic and dilg. the ***masterbatch*** with addnl. thermoplastic polymer. Moldings, prepd. from 90/10 high-d. polyethylene (HDPE)-Vectra A950 (I, liq.-cryst. polyester) ***masterbatch*** with subsequent diln. by HDPE to I content 1%, had tensile strength 3518.9 psi, yield elongation 11.19%, break elongation .gtoreq.995% (for 3 of 6 samples), and good chem resistance.		
ST	polyethylene liq cryst polyester blend; chem resistance polyethylene polyester blend; dispersion liq cryst polyester polyethylene		
IT	Impact-resistant materials (blends of liq.-cryst. polyesters and thermoplastic polymers as, with		

good mech. strength and chem resistance)

IT Acrylic polymers, uses  
Polyamides, uses  
RL: USES (Uses)  
(liq.-cryst. polyester blends with, with good mech. strength and chem resistance)

IT Plastics, molded  
RL: USES (Uses)  
(liq.-cryst. polyester blends, with good mech. strength and chem resistance)

IT Polyesters, miscellaneous  
RL: MSC (Miscellaneous)  
(liq.-cryst., blends with thermoplastic polymers, with good mech. strength and chem resistance)

IT Alkenes, polymers  
RL: USES (Uses)  
(polymers, liq.-cryst. polyester blends with, with good mech. strength and chem resistance)

IT Chemically resistant materials  
(solvent-resistant, blends of liq.-cryst. polyesters and thermoplastic polymers as, with good mech. strength)

IT Liquid crystals, polymeric  
(thermotropic, polyester, blends with thermoplastic polymers, with good mech. strength and chem resistance)

IT 25822-54-2, Rodrun 31072-56-7, Xydar 81843-52-9, Vectra A 950  
RL: USES (Uses)  
(blends with thermoplastic polymers, with good mech. strength and chem resistance)

IT 9003-07-0, Polypropylene  
RL: USES (Uses)  
(liq.-cryst. polyester blends with 5C08, with good mech. strength and chem resistance)

IT 9002-88-4, Polyethylene 9003-53-6 9010-79-1, Ethylene-propylene copolymer 25068-26-2, Poly(4-methyl-1-pentene) 26221-73-8, Dowlex 2045 108771-80-8, Barex 210  
RL: USES (Uses)  
(liq.-cryst. polyester blends with, with good mech. strength and chem resistance)

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(FILE 'HOME' ENTERED AT 15:39:55 ON 16 AUG 2005)

FILE 'CAPLUS' ENTERED AT 15:40:03 ON 16 AUG 2005

L1 2603 S (PDLC OR ((POLYMER(4A)DISPERS?) (5A) (LC OR LCD OR (LIQUID(4A)C  
L2 5 S (COPY? OR COPIED OR MASTER? OR (CONTACT(5A)EXPOS?)) AND L1  
L3 5 S (COPY? OR COPIED OR MASTER? OR DUPLICAT? OR (CONTACT(5A)EXPOS

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	51.12	51.33
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-3.65	-3.65

STN INTERNATIONAL LOGOFF AT 15:43:06 ON 16 AUG 2005